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Ministry of Agriculture and Farmers Welfare
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Department of Agriculture, Cooperation and Farmers Welfare
उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान,
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SPECIFICATIONS

1 General:

Name and address of manufacturer	:
Name of machine	:
Make	:
Model	:
Type	:
Size of thresher (mm)(width x dia of cylinder)	:
Recommended Input capacity (kg/h)	:
Serial number	:
Year of manufacture	:

2 Design suitability:

Main crop recommended	:
Other crops recommended	:
Thresher evaluated for	:

3 Power Unit:

Type of prime-mover	:
Power requirement (kW)	:

3.1 Details of prime-mover used

Type	:
Make	:
Model	:
Serial Number	:
Type of drive	:
Prime-mover mounting	:

4 Constructional details

4.1 Main frame:

Constructional details	:
Type	:
Size of MS box (mm)	:
Material	:
Size of Rectangular box (mm)	:

4.1.1 Prime-mover mounting frame:

Constructional details	:
Material	:
Size of angle iron (mm)	:
Provision for belt tensioning	:

4.2. Crop feeding system (Refer Fig.2)

Method of feeding	:

Type of feeding system :

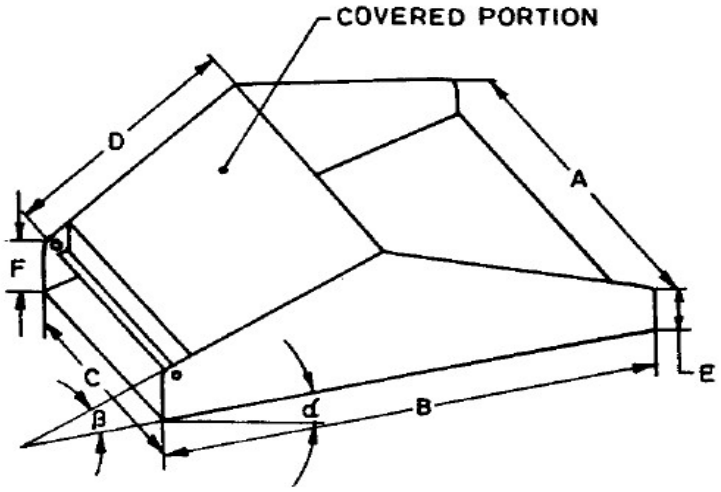

Fig.1: Schematic view of feeding chute As Per Indian Standard

Constructional details :
Location of feeding chute :
Size of feeding chute opening (mm) :

Height of feeding chute above the ground level (mm) :

4.2.1 Specifications of feeding chute (Refer IS: 9020-2002, Reaffirmed 2012):

S. No.	Notation	As per IS: 9020-1995 (mm)	As measured (mm)	Remarks
1	A	480		
2	B	900 (min)		
3	C	400		
4	D	450 (min)		
5	E	60		
6	F	190		
7	α	10 – 15 ^{o}		
8	β	10 – 30 ^{o}		
9	Sheet thickness	1.6 (min)		
10	**Other requirements:**			
To Facilitate easy and smooth feeding of the crop during the operation, the feeding chute shall be properly mounted on the thresher.				
No sharp edges shall be provided on the feeding chute				
The covered portion of the chute shall be rigidly attached & shall not be able to be detached without cutting				
The feeding chute shall be so fixed with the thresher that it is not possible to remove it easily.				

4.3 Threshing unit:

4.3.1 Threshing cylinder

Type :
Size of cylinder (mm) :
Construction details :
Type of spike (mm) :
Size of spike (mm)
- Length :
- Diameter :

Number of spikes on each bar :
Peripheral distance between two spikes (mm) :
Nominal dia. of cylinder (mm) :
Effective dia. of cylinder (mm) :
Width of cylinder (mm) :
Threshing cylinder rotational speed(rpm)
- Recommended :
- As observed (No-load) :

Mass of threshing cylinder (kg) :

4.3.2 Main Shaft

Material :
Size (mm) :
No. & type of bearings on shaft :

4.3.3 Flanges :

Number of flanges :
Material
Size of flange (OD/ID x width) (mm) :
Number of spokes on each flange :
Size of spoke (mm) :
Size of flange hub (OD x Length) (mm) :

4.3.4 Threshing Cylinder Top Cover

Type :
Material & thickness of top cover (mm) :
Dimension (mm) (L x W) :
Dimension of feeding chute opening (mm) :
Method of fixing :

4.4 Concave

Type :
Constructional details :
Material :
Size of opening(mm) :
No. of longitudinal flats :
No. of radial bars :
Gap between two longitudinal flats (mm) :
Peripheral length (mm) :
Effective length (mm) :
Peripheral width (mm) :
Effective width (mm) :
Concavity (mm) :
Effective area of concave (m^2) :
Method of clearance adjustment :
Method of adjustment of concave construction :
Range of concave clearance (mm) :

4.5 Cleaning Unit:

4.5.1 Sieve

Number of sieves :
Material & type :
Thickness of sieve (mm) :
Size of holes (mm) :
Density of holes (Nos./cm^2) :

	Size of sieve (mm)	:
	Effective size (mm)	:
	Effective area (cm^2)	:
	Angle of inclination (º)	:
	Provision for angle adjustment	:
	Depth of sieve (mm)	:
4.5.2	**Blower**	
	Type	:
	Number of blades	:
	Size of blades (mm)	:
	Dia. of blower (mm)	:
	Material of blade	:
	Constructional details	:
	Material of blower cover	:
	Thickness of blower cover (mm)	:
	Dia. of blower with cover (mm)	:
	Length of blower with cover (mm)	:
	Method of drive	:
	Dia. of drive pulley (mm) (OD/ID)	:
	Dia. of driven pulley (mm) (OD/ID)	:
	No. & type of bearings for mounting shaft	:
	Method of lubrication	:
4.6	**Shaking mechanism**	
	Type	:
	Method of drive	:
	Length of stroke (mm)	:
4.6.1	**Front hangers**	
	Number	:
	Material	:
	Size of hanger (mm) (L x D)	:
4.6.2	**Rear hangers**	
	Number	:
	Material	:
	Size of hanger (mm) (L x D)	:
4.7	**Outlets**	
	Number of outlets	:

4.7.1 Main Grain Outlet

Location :

Material and thickness (mm) :

Size (mm) :

Inclination (^{0}) :

Height of outlet from ground level (mm) :

4.7.2 Straw outlet

Location :

Material and thickness (mm) :

Size (mm) :

Height of outlet from ground level (mm) :

Opening adjustment :

4.7.3 Sieve Outlet

Location :

Material and thickness (mm) :

Size (mm) W x D :

Height from ground level (mm) :

4.7.4 Foreign/Bhusa material Outlet

Location :

Material and thickness (mm) :

Size (mm) :

Height from ground level (mm) :

4.8 Power Transmission

4.8.1 Prime-mover to Threshing cylinder

Type :

Size of drive pulley (mm)(OD/ID) :

Size of driven pulley (mm)(OD/ID) :

Speed reduction ratio :

No & size of belt (mm) :

4.8.2 Threshing cylinder to Blower

Type :

Size of drive pulley (mm)(OD/ID) :

Size of driven pulley (mm)(OD/ID) :

Speed reduction ratio :

No & size of belt (mm) :

4.8.3 Threshing cylinder to Shaking unit

Type :

Size of drive pulley (mm)(OD/ID) :

Size of driven pulley (mm)(OD/ID) :

Speed reduction ratio :

No & size of belt :

4.9 Transporting Unit

4.9.1 Axle

No. of axles :

Constructional details :

Size of axle (mm) (L x Dia.) :

Method of mounting :

4.9.2 Wheels

No. of wheels :

Type :

Make & model :

Size :

Recommended Inflation pressure of tyre (kg/cm^2) :

Method of mounting :

4.9.3 Transporting hitch

Hitch beam

Constructional details :

4.10 Material of construction

S. No.	Components	As per IS	Material	Conformity to IS
1	Main frame	Mild Steel		
2	Feeding chute	Mild Steel		
3	Threshing cylinder	Mild Steel/CI		
4	Concave	Mild Steel		
5	Shaft	Mild Steel		
6	Blower	Mild Steel		
7	Pulleys	Cast Iron		
8	Transport wheel	MS, CI, Pneumatic wheels		

4.11 Adjustments

Particulars	Method of adjustment	As recommended	As adjusted
Threshing cylinder speed (rpm)			
Concave clearance (mm)			
Blower speed (rpm)			
Shaker pulley speed (rpm)			
Length of stroke (mm)			
Angle of sieves (deg)			

4.12 Lubricating points

S. No.	Location	Number of grease Nipples	Recommended lubricant	Lubricating schedule
1	Main shaft bearings			
2	Blower shaft bearings			
3	Shaking mechanism			

4.13 Overall dimensions (mm):

Length	Width	Height	Ground clearance

4.14 Mass (kg)

- With prime mover :
- Without prime-mover :

4.15 Colour of the machine :

5.0 Any other specific recommendations:

Place: ……..

Dated: ……

Signature:……

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Name of the signatory: ……

Designation:……

Address:……..